

### Indiana Department of Environmental Management

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Joseph E. Kernan Governor

October 9, 2003

100 North Senate Avenue P.O. Box 6015 Indianapolis, Indiana 46206-6015 (317) 232-8603 (800) 451-6027 www.in.gov/idem

Lori F. Kaplan Commissioner

> TO: Interested Parties / Applicant

RE: Iron Dynamics, Inc. / 033-17936-00076

FROM: Paul Dubenetzky

Chief, Permits Branch Office of Air Quality

## **Notice of Decision: Approval - Effective Immediately**

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, within eighteen (18) calendar days of the mailing of this notice. The filing of a petition for administrative review is complete on the earliest of the following dates that apply

- the date the document is delivered to the Office of Environmental Adjudication (OEA); (1)
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail: or
- The date on which the document is deposited with a private carrier, as shown by receipt issued by (3)the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- the name and address of the person making the request: (1)
- (2) the interest of the person making the request;
- (3)identification of any persons represented by the person making the request;
- the reasons, with particularity, for the request: (4)
- the issues, with particularity, proposed for considerations at any hearing; and (5)
- identification of the terms and conditions which, in the judgment of the person making the request, (6)would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

> **Enclosures** FNPER-MOD.dot 9/16/03



## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



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Governor

Lori F. Kaplan Commissioner

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October 9, 2003

Mr. Barry Smith Iron Dynamics, Inc. 4500 County Road 59 Butler, Indiana 46721

Re: Minor Source Modification No.:

033-17936-00076

#### Dear Mr. Smith:

Iron Dynamics, Inc. applied for a Part 70 operating permit on January 11, 2000 for a gray iron foundry direct reduced iron facility. An application to modify the source was received on July 21, 2003. Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

- (a) One (1) SAF dust recycling system, identified as #79 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (b) One (1) zinc silo, identified as #80 and constructed in 2003, with a maximum throughput rate of 3.0 tons of recycled zinc per hour, controlled by one (1) filter, and exhausting through stack S80.
- (c) One (1) ash silo, identified as #81 and constructed in 2003, with a maximum throughput rate of 3.0 tons of ash per hour, controlled by one (1) filter, and exhausting into the building.
- (d) One (1) EAF dust unloading process, identified as #82 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (e) One (1) vacuum system, identified as #83 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (f) One (1) zinc silo unloading process, identified as #84 and constructed in 2003, with a maximum throughput rate of 3.0 tons of zinc per hour, controlled by one (1) filter, and exhausting into the building.
- (g) One (1) ash silo unloading process, identified as #85 and constructed in 2003, with a maximum throughput rate of 3.0 tons of zinc per hour, controlled by one (1) filter, and exhausting into the building.

The proposed Minor Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(I)(3). The source may begin operation upon issuance of the source modification approval.

Permit Reviewer: ERG/YC

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky Paul Dubenetzky, Chief Permits Branch Office of Air Quality

#### ERG/YC

cc: File - DeKalb County
DeKalb County Health Department
Air Compliance - Doyle Houser
Northern Regional Office
Permit Tracking - Sara Cloe

Technical Support and Modeling - Michele Boner

Compliance Branch - Karen Nowak

## Indiana Department of Environmental Management



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## PART 70 MINOR SOURCE MODIFICATION OFFICE OF AIR QUALITY

Iron Dynamics, Inc. 4500 County Road 59 Butler, Indiana 46721

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Minor Source Modification No.: 033-17936-00076	
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: October 9, 2003



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#### **SECTION A**

#### **SOURCE SUMMARY**

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

#### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary gray iron foundry direct reduced iron facility.

Responsible Official: DRI Manager

Source Address: 4500 County Road 59, Butler, Indiana 46721 Mailing Address: 4500 County Road 59, Butler, Indiana 46721

General Source Phone Number: (260) 868-8000

SIC Code: 3312 County Location: DeKalb

Source Location Status: Attainment for all criteria pollutants

Source Status: Part 70 Permit Program

Major source under PSD

Major Source, Section 112 of the Clean Air Act

1 of 28 Source Categories

## A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

- (a) One (1) SAF dust recycling system, identified as #79 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (b) One (1) zinc silo, identified as #80 and constructed in 2003, with a maximum throughput rate of 3.0 tons of recycled zinc per hour, controlled by one (1) filter, and exhausting through stack S80.
- (c) One (1) ash silo, identified as #81 and constructed in 2003, with a maximum throughput rate of 3.0 tons of ash per hour, controlled by one (1) filter, and exhausting into the building.
- (d) One (1) EAF dust unloading process, identified as #82 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (e) One (1) vacuum system, identified as #83 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (f) One (1) zinc silo unloading process, identified as #84 and constructed in 2003, with a maximum throughput rate of 3.0 tons of zinc per hour, controlled by one (1) filter, and exhausting into the building.

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(g) One (1) ash silo unloading process, identified as #85 and constructed in 2003, with a maximum throughput rate of 3.0 tons of zinc per hour, controlled by one (1) filter, and exhausting into the building.

## A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 Applicability).

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#### SECTION B GENERAL CONSTRUCTION CONDITIONS

#### B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

#### B.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

#### B.3 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

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#### SECTION C

#### **GENERAL OPERATION CONDITIONS**

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).
- C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]
  - (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs), within ninety (90) days after issuance of this permit, including the following information on each facility:
    - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
    - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
    - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management Compliance Branch, Office of Air Quality 100 North Senate Avenue, P. O. Box 6015 Indianapolis, Indiana 46206-6015

The PMP extension notification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes is the primary contributor to an exceedance of any limitation on emission or potential to emit. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for the unit.

#### C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management Permits Branch, Office of Air Quality 100 North Senate Avenue, P.O. Box 6015 Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]
- (d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

#### C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

#### C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

#### C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP) pursuant to 326 IAC 1-7-3.

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#### Compliance Requirements [326 IAC 2-1.1-11]

#### C.8 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

#### Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

#### C.9 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

If required by Section D, all monitoring and record keeping requirements shall be implemented when operation begins. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

#### C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

#### Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

- C.11 Compliance Response Plan Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]
  - (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. If a Permittee is required to have an Operation, Maintenance and Monitoring (OMM) Plan under 40 CFR 60/63, such plans shall be deemed to satisfy the requirements for a CRP for those compliance monitoring conditions. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
    - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
    - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan to include such response steps taken.

The OMM Plan shall be submitted within the time frames specified by the applicable 40 CFR60/63 requirement.

- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
  - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan; or

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(2) If none of the reasonable response steps listed in the Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

- (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
- (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
  - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.
  - (3) An automatic measurement was taken when the process was not operating.
  - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

### C.12 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

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(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

- (2) The permitted facility was at the time being properly operated;
- During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and the Northern Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

IDEM. OAQ

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section)

or,

Telephone No.: 317-233-5674 (ask for Compliance Section)

Facsimile No.: 317-233-5967

Northwest Regional Office

Telephone No.: 1-888-209-8892, or Telephone No. 219-881-6712 Facsimile No.: 219-881-6745

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management Compliance Branch, Office of Air Quality 100 North Senate Avenue, P. O. Box 6015 Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

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(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(9) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

## C.13 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

#### Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

#### C.14 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

#### C.15 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

(a) The reports required by conditions in Section D of this permit shall be submitted to:

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Indiana Department of Environmental Management Compliance Data Section, Office of Air Quality 100 North Senate Avenue, P. O. Box 6015 Indianapolis, Indiana 46206-6015

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

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#### SECTION D.1

#### **FACILITY OPERATION CONDITIONS**

#### Facility Description [326 IAC 2-7-5(15)]:

- (a) One (1) SAF dust recycling system, identified as #79 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (b) One (1) zinc silo, identified as #80 and constructed in 2003, with a maximum throughput rate of 3.0 tons of recycled zinc per hour, controlled by one (1) filter, and exhausting through stack S80.
- (c) One (1) ash silo, identified as #81 and constructed in 2003, with a maximum throughput rate of 3.0 tons of ash per hour, controlled by one (1) filter, and exhausting into the building.
- (d) One (1) EAF dust unloading process, identified as #82 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (e) One (1) vacuum system, identified as #83 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (f) One (1) zinc silo unloading process, identified as #84 and constructed in 2003, with a maximum throughput rate of 3.0 tons of zinc per hour, controlled by one (1) filter, and exhausting into the building.
- (g) One (1) ash silo unloading process, identified as #85 and constructed in 2003, with a maximum throughput rate of 3.0 tons of zinc per hour, controlled by one (1) filter, and exhausting into the building.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

#### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.1.1 PSD Minor Modification Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 (PSD), the PM and PM10 emissions from units #79 through #85 shall not exceed the emissions limits listed in the table below:

Unit ID	PM Emission Limit (lbs/hr)	PM10 Emission Limit (lbs/hr)
#79	0.15	0.15
#80	0.08	0.08
#81	0.08	0.08
#82	0.21	0.21
#83	0.02	0.02
#84	0.02	0.02
#85	0.02	0.02

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This is equivalent to 2.54 tons of PM and PM10 emissions from these emission units. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

#### D.1.2 Part 70 Minor Source Modification [326 IAC 2-7-10.5(d)(5)]

Pursuant to 326 IAC 2-7-10.5(d)(5) (Part 70 Minor Source Modification), the filters equipped with units #79 through #85 shall comply with the following limits when these units are in operation:

- (a) At least 99% control efficiency; and
- (b) No visible emissions.

### D.1.3 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from each of the units #79 through #85 shall not exceed 8.56 pounds per hour when operating at a process weight rate of 3.0 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

 $E = 4.10 P^{0.67}$  where E =rate of emission in pounds per hour; and P =process weight rate in tons per hour

#### D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

#### **Compliance Determination Requirements**

#### D.1.5 PM and PM10 Control

In order to comply with Conditions D.1.1, D.1.2 and D.1.3, the filters for PM and PM10 control shall be in operation and control emissions from units #79 through #85 at all times that these units are in operation.

#### Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

#### D.1.6 Visible Emissions Notations

- (a) Visible emission notations of stack exhausts from stack S80 shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

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(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.1.7 Filter Inspections

An inspection shall be performed each calendar quarter of all filters controlling units #79 through #85 when venting to the atmosphere. A filter inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. Inspections required by this condition shall not be performed in consecutive months. All defective filters shall be replaced.

#### Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

#### D.1.8 Record Keeping Requirements

- (a) To document compliance with Condition D.1.6, the Permittee shall maintain once per shift records of visible emission notations of the stack exhausts from stack S80.
- (b) To document compliance with Condition D.1.7, the Permittee shall maintain records of the results of the inspections required under Condition D.1.7 and the dates the vents are redirected.
- (c) To document compliance with Condition D.1.4, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (d) All records shall be maintained in accordance with Section C General Record Keeping Requirements, of this permit.

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# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

# PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: Iron Dynamics, Inc.

Source Address: 4500 County Road 59, Butler, Indiana 46721 Mailing Address: 4500 County Road 59, Butler, Indiana 46721

Source Modification No.: 033-17936-00076

	This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.
	Please check what document is being certified:
9	Test Result (specify)
9	Report (specify)
9	Notification (specify)
9	Affidavit (specify)
9	Other (specify)
	tify that, based on information and belief formed after reasonable inquiry, the statements and information e document are true, accurate, and complete.
Sign	ature:
Print	red Name:
Title	/Position:
Date	:

# Indiana Department of Environmental Management Office of Air Quality

## Technical Support Document (TSD) for a Part 70 Minor Source Modification

#### **Source Background and Description**

Source Name: Iron Dynamics, Inc.

Source Location: 4500 County Road 59, Butler, Indiana 46721

County: DeKalb SIC Code: 3312

Operation Permit No.: T033-12614-00076

Operation Permit Issuance Date: Pending

Minor Source Modification No.: 033-17936-00076

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The Office of Air Quality (OAQ) has reviewed a modification application from Iron Dynamics, Inc. relating to the construction of the following emission units and pollution control devices:

- (a) One (1) SAF dust recycling system, identified as #79 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (b) One (1) zinc silo, identified as #80 and constructed in 2003, with a maximum throughput rate of 3.0 tons of recycled zinc per hour, controlled by one (1) filter, and exhausting through stack S80.
- (c) One (1) ash silo, identified as #81 and constructed in 2003, with a maximum throughput rate of 3.0 tons of ash per hour, controlled by one (1) filter, and exhausting into the building.
- (d) One (1) EAF dust unloading process, identified as #82 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (e) One (1) vacuum system, identified as #83 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (f) One (1) zinc silo unloading process, identified as #84 and constructed in 2003, with a maximum throughput rate of 3.0 tons of zinc per hour, controlled by one (1) filter, and exhausting into the building.
- (g) One (1) ash silo unloading process, identified as #85 and constructed in 2003, with a maximum throughput rate of 3.0 tons of zinc per hour, controlled by one (1) filter, and exhausting into the building.

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#### History

On July 21, 2003, Iron Dynamics submitted an application to IDEM, OAQ requesting the addition of new silos and several material handling processes to their existing pig iron production line. Iron Dynamics is an existing gray iron foundry direct reduced iron facility and is a PSD major source. The source submitted their Part 70 permit application (T033-12614-00076) on January 11, 2000. This Part 70 permit is currently being drafted and has not yet been issued.

The proposed units will be used to transfer and recycle the dust collected from baghouses, which are used to control the emissions from furnaces RHF and SAF. The recycled dust will substitute a small portion of the raw material fed into this process line. Therefore, this modification will not debottleneck or increase utilization of the exiting furnaces RHF and SAF.

#### **Enforcement Issue**

There are no enforcement actions pending.

#### **Stack Summary**

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S80	Zinc Silo	86	2.2	900	90

#### Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on July 21, 2003. Additional information was received on August 15, 2003.

#### **Emission Calculations**

See Appendix A of this document for detailed emissions calculations (page 1).

#### **Potential To Emit of Modification**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	253
PM-10	253

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SO <sub>2</sub>	
VOC	
СО	
NO <sub>x</sub>	

#### **Justification for Modification**

This modification is being performed through a Part 70 Minor Source Modification pursuant to 326 IAC 2-7-10.5(d)(5) as the potential to emit PM and PM10 is each limited to less than 25 tons per year by using filters with a 99% control efficiency and no visible emissions.

#### **County Attainment Status**

The source is located in DeKalb County.

Pollutant	Status
PM-10	Attainment
$SO_2$	Attainment
NO <sub>2</sub>	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. DeKalb County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) DeKalb County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Fugitive Emissions
  Since this type of operation is in one of the 28 listed source categories under 326 IAC 2-2 the fugitive PM emissions are counted toward determination of PSD applicability.

#### **Source Status**

Existing Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	Greater than 100
PM-10	Greater than 100
SO <sub>2</sub>	Greater than 100
VOC	Less than 100
СО	Greater than 100
NOx	Greater than 100

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(a) This existing source is a major stationary source because at least one of the attainment regulated pollutants is emitted at a rate of 100 tons or more per year, and it is in one of the 28 listed source categories.

(b) These emissions were based on the Addendum to Technical Support Document (ATSP) for SSM #033-15955-00076, issued on December 18, 2002.

#### Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO <sub>2</sub>	VOC	СО	NO <sub>X</sub>	HAPs
Units #79 through #85	Less than 2.54	Less than 2.54	-	-	1	-	-
Total PTE of this Modification	Less than 2.54	Less than 2.54	-	-	-1		-
PSD Significant Modification Thresholds	25	15	40	40	100	40	NA

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

#### **Federal Rule Applicability**

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this modification.
- (c) This modification does not involve a pollutant-specific emissions unit:
  - (1) with the potential to emit before controls equal to or greater than one hundred (100) tons per year, and
  - (2) that is subject to an emission limit and has a control device that is necessary to meet that limit.

Therefore, the units in this modification are not subject to 40 CFR Part 64 - Compliance Assurance Monitoring (CAM).

#### State Rule Applicability - Silos and Dust Handling Processes (#79 through #85)

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source was constructed in 1987 and modified in 1997 and 2002. This source is in one 1 of 28

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source categories defined in 326 IAC 2-2-1(p)(1) and is an existing PSD major source. The potential to emit of this modification is greater than 25 tons/yr for PM and greater than 15 tons/yr for PM10. In order to be a PSD minor modification project, the PM and PM10 emissions from the proposed units shall not exceed the emission limits listed in the table below:

Unit ID	PM Emission Limit (lbs/hr)	PM10 Emission Limit (lbs/hr)
#79	0.15	0.15
#80	0.08	0.08
#81	0.08	0.08
#82	0.21	0.21
#83	0.02	0.02
#84	0.02	0.02
#85	0.02	0.02

The emission limits in the table above are the potential to emit PM/PM10 after control from units #79 through #85. This is equivalent to a total of 2.54 tons of PM/PM10 emissions from the proposed units. The use of filters ensures compliance with these limits. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

#### 326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### 326 IAC 2-7-10.5(d) (Part 70 Minor Source Modification)

Pursuant to 326 IAC 2-7-10.5(d)(5)(C) (Part 70 Minor Source Modification), the filters, which are used to limit the PM and PM10 emissions from this project to less than 25 tons/yr, shall comply with the following limits when units #79 through #85 are in operation:

- (a) At least 99% control efficiency; and
- (b) No visible emissions.

#### 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

particulate emissions from each of the units #79 through #85 shall not exceed 8.56 pounds per hour when operating at a process weight rate of 3.0 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

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 $E = 4.10 P^{0.67}$  where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

According to the emission calculations (see Appendix A), the potential to emit PM after filter control from each of units #79 through #85 is less than the emission limit above. Therefore, units #79 through #85 are in compliance with 326 IAC 6-3-2. The use of filters ensures compliance with this limit.

#### **Compliance Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

- 1. The proposed zinc silo (#80), which exhausts to the atmosphere, has applicable compliance monitoring conditions as specified below:
  - (a) Visible emissions notations of the stack exhausts from stack S80 shall be performed once per shift during normal daylight operations when venting to the atmosphere. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
  - (b) An inspection shall be performed each calendar quarter of all filters controlling the zinc silo (#80). Inspections are optional when venting indoors. Inspections required by this condition shall not be performed in consecutive months. All defective filters shall be replaced.

[Note: The filter is equipped at the bin vent of the zinc silo and there is no corresponding pressure drop reading for this type of filter.]

These monitoring conditions are necessary because the filter associated with zinc silo

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(#80) must operate properly to ensure compliance with 326 IAC 2-7-10.5 (d) (Part 70 Minor Source Modification), 326 IAC 2-2 (PSD), and 326 IAC 6-3-2 (Manufacturing Processes).

2. The proposed ash silo (#81) and other dust handling processes (#79, #82 through #85), which exhaust into the building, have applicable compliance monitoring conditions as specified below:

An inspection shall be performed each calendar quarter of all filters controlling the units #79 and #81 through #85. A filter inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. Inspections required by this condition shall not be performed in consecutive months. All defective filters shall be replaced.

[Note: There is no corresponding pressure drop reading for this type of filter.]

These monitoring conditions are necessary because the filter associated with the units #79 and #81 through #85 must operate properly to ensure compliance with 326 IAC 2-7-10.5 (d) (Part 70 Minor Source Modification), 326 IAC 2-2 (PSD), and 326 IAC 6-3-2 (Manufacturing Processes).

#### Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 033-17936-00076.